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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/750,363	12/31/2003	Krishna Bharat	Google-44 (GP-096-00-US)	4908
26479	7590	07/25/2007	EXAMINER	
STRAUB & POKOTYLO 620 TINTON AVENUE BLDG. B, 2ND FLOOR TINTON FALLS, NJ 07724			AUGUSTIN, EVENS J	
			ART UNIT	PAPER NUMBER
			3621	
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			07/25/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

### Application No.

10/750,363

### Applicant(s)

BHARAT ET AL.

### Examiner

Evans Augustin

### Art Unit

3621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 05/04/2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,3,5-26,33,35,37-58,65,66,69-71 and 73-75 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,5-26,33,35,37-58,65,66,69-71 and 73-75 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>3/16/2007</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Status of Claims***

1. Receipt is acknowledged of a applicant's election of restriction requirement, filed on 04 May 2007.
2. Claims 1, 3, 5-26, 33, 35, 37-58, 65, 66, 69-71 and 73-75 are pending.

### ***Claim Rejections - 35 USC § 101***

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requires of this title.

4. Claims 1, 3, 5-33, 35, and 37-66 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.
5. The claimed invention as a whole must accomplish a practical application. That is, it must produce a "useful, concrete and tangible result." State Street, 149 F.3d at 1373, 47 USPQ2d at 1601-02. The purpose of this requirement is to limit patent protection to inventions that possess a certain level of "real world" value, as opposed to subject matter that represents nothing more than an idea or concept, or is simply a starting point for future investigation or research (Brenner v. Manson, 383 U.S. 519, 528-36, 148 USPQ 689, 693-96); In re Ziegler, 992, F.2d 1197, 1200-03, 26 USPQ2d 1600, 1603-06 (Fed. Cir. 1993)).
6. Although the courts have yet to define the terms useful, concrete, and tangible in the context of the practical application requirement for purposes of these guidelines, the following

examples illustrate claimed inventions that have a practical application because they produce useful, concrete, and tangible result:

- A. Claims drawn to a long-distance telephone billing process containing mathematical algorithms were held to be directed to patentable subject matter because “the claimed process applies the Boolean principle **to produce a useful, concrete, tangible result without pre-empting other uses of the mathematical principle.**” AT &T Corp. v. Excel Communications, Inc., 172 F.3d 1352, 1358, 50 USPQ2d 1447, 1452 (Fed. Cir.1999);
- B. “Transformation of data, representing discrete dollar amounts, by a machine through a series of mathematical calculations **into a final share price**, constitutes a practical application of a mathematical algorithm, formula, or calculation, because **it produces a useful, concrete and tangible result’ -- a final share price momentarily fixed for recording and reporting purposes and even accepted and relied upon by regulatory authorities and in subsequent trades.**” State Street, 149 F.3d at 1373, 47 USPQ2d at 1601;
- C. Claims drawn to a rasterizer for converting discrete waveform data samples **into anti-aliased pixel illumination intensity data to be displayed on a display means** were held to be directed to patentable subject matter since the claims defined “a specific machine to produce a useful, concrete, and tangible result.” In re Alappat, 33 F.3d 1526, 1544, 31 USPQ2d 1545, 1557 (Fed. Cir. 1994).

7. A process that consists solely of the manipulation of an abstract idea is not concrete or tangible. See *In re Warmerdam*, 33 F.3d 1354, 1360, 31 USPQ2d 1754, 1759 (Fed. Cir. 1994). See also *Schrader*, 22 F.3d at 295, 30 USPQ2d at 1459.
8. In the present case, the USPTO has determined that claims 1, 3, 5-33, 35, and 37-66 are nothing more than the manipulation of data within a computing environment. The aspects of taking search information or data provided by the user, graphing users versus the results of previous searches (data), and correlate the users with the searches and search results (data) are operations of normal computing device. The current claims failed to indicate how the determined profiles are configured and interrelated to provide a specific functionality. The claims do not provide a relationship between the profiles to other subject matter outside a computing device that constitutes the invention i.e., targeted advertising.

***Claim Rejections - 35 USC § 112 – 2<sup>nd</sup> Paragraph***

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claims 1 and 3, 33, 35 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 1 and 33 indicate that search information is independent of the documents retrieved from the search results, but claims 3 and 33 indicate that the user search information is dependent search result information. Also, Claims 1 and 33 indicate that search information is independent of the documents retrieved from the search results. The USPTO contends that the search results could not be independent of the user's

search query information. The premise behind search programs is to provide the user with relevant information or documents, based on the user's search information or interest. The USPTO contends that a search program that provides users with search results that are independent or irrelevant from the user's search interests is considered inoperable.

### *Claim Interpretation*

11. In determining patentability of an invention over the prior art, the USPTO has considered all claimed limitations, and interpreted as broadly as their terms reasonably allow. Additionally, all words in the claims have been considered in judging the patentability of the claims against the prior art.
12. It should also be noted that, in the office action that:
  - A. Items in the rejection that are in quotation marks are claimed language/limitations
  - B. Functional recitation(s) using the word "for" or other functional terms (*e.g.* "for monitoring operation of a self service terminal application exceeded by a self service terminal coupled to the computer" as recited in claim 8) have been considered but given less patentable weight<sup>1</sup> because they fail to add any steps and are thereby regarded as intended use language. To be especially clear, the Examiner has considered all claim limitations. However the A recitation of the intended use of the claimed invention must result in additional steps. See *Bristol-Myers Squibb Co. v. Ben Venue Laboratories, Inc.*, 246 F.3d 1368, 1375-76, 58 USPQ2d 1508, 1513 (Fed.

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<sup>1</sup> See *e.g. In re Gulack*, 703 F.2d 1381, 217 USPQ 401, 404 (Fed. Cir. 1983)(stating that although all limitations must be considered, not all limitations are entitled to patentable weight).

Cir. 2001) (Where the language in a method claim states only a purpose and intended result, the expression does not result in a manipulative difference in the steps of the claim.).

- C. Word(s) that are separated by “/” are being examined as being synonymous or equivalent
- D. “Topology” – Per Merriam Webster’s dictionary : topographic study of a particular place; specifically : the history of a region as indicated by its topography2 a (1): a branch of mathematics concerned with those properties of geometric configurations (as point sets) which are unaltered by elastic deformations (as a stretching or a twisting) that are homeomorphisms (2): the set of all open subsets of a topological space b: configuration <topology of a molecule> <topology of a magnetic field>.
- E. “Infer” – Per Merriam Webster’s: "1: to derive as a conclusion from facts or premises <we see smoke and infer fire — L. A. White> — compare imply 2: guess, surmise <your letter...allows me to infer that you are as well as ever — O. W. Holmes died 1935> 3 a: to involve as a normal outcome of thought b: to point out : indicate <this doth infer the zeal I had to see him — Shakespeare> <another survey...infers that two-thirds of all present computer installations are not paying for themselves — H. R. Chellman> 4: suggest, hint <are you inferring I'm incompetent?> intransitive verb: to draw inferences <men...have observed, inferred, and reasoned...to all kinds of results — John Dewey>
- F. “Graph” – per Merriam Webster’s: 1 : the collection of all points whose coordinates satisfy a given relation (as a function) 2 : a diagram (as a series of one or more points,

lines, line segments, curves, or areas) that represents the variation of a variable in comparison with that of one or more other variables 3 : a collection of vertices and edges that join pairs of vertices

- G. "Node" – Per Merriam Webster's : " 4 a: a point, line, or surface of a vibrating body or system that is free or relatively free from vibratory motion b: a point at which a wave has an amplitude of zero 5 a: a point at which subsidiary parts originate or center b: a point on a stem at which a leaf or leaves are inserted c: a point at which a curve intersects itself in such a manner that the branches have different tangents d: vertex
- H. The USPTO interprets claim limitations that contain statement(s) such as "*if, may, might, can, could, when, potentially, possibly*", as optional language (this list of examples is not intended to be exhaustive). As matter of linguistic precision, optional claim elements do not narrow claim limitations, since they can always be omitted (*In re Johnston*, 77 USPQ2d 1788 (Fed. Circ. 2006)). They will be given less patentable weight, because language that suggests or makes optional but does not require steps to be performed or does not limit a claim to a particular structure does not limit the scope of a claim or claim limitation.
- I. Independent claims are examined together, since they are not patentable distinct. If applicant expressly states on the record that two or more independent and distinct inventions are claimed in a single application, the Examiner may require the applicant to elect an invention to which the claims will be restricted.
- J. Any official notices taken by the USPTO that are not adequately traversed by applicant will be taken to be admitted prior art.



K. Technical words or phrases that are not lexicographically defined will be interpreted by the USPTO in accordance to Computer Dictionary, 3<sup>rd</sup> Edition, Microsoft Press, Redmond, WA, 1997.<sup>2</sup>

***Claim Rejections - 35 USC § 103***

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

14. Claims 1, 3, 5-26, 33, 35, 3758, 65, 66, 69-71 and 73-75 are rejected under 35 U.S.C. 103(a) as being unpatentable over Herz et al. (U.S 5,754,939), in view of Rose et al. (U.S 5724567).

15. As per claims 1, 3, 5-26, 33, 35, 3758, 65, 66, 69-71 and 73-75, Herz et al. discloses a computer system for evaluating customer and document/object profiles to automatically generate “target profiles” that most likely will interest the user. The computer system

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<sup>2</sup> Based upon Applicants’ disclosure, the art of record, and the knowledge of one of ordinary skill in this art as determined by the factors discussed in MPEP §2141.03 (where practical), the Examiner finds that the *Microsoft Press Computer Dictionary* is an appropriate technical dictionary known to be used by one of ordinary skill in this art. See e.g. *Altiris Inc. v. Symantec Corp.*, 318 F.3d 1363, 1373, 65 USPQ2d 1865, 1872 (Fed. Cir. 2003) where the Federal Circuit used the *Microsoft Press Computer Dictionary* (3d ed.) as “a technical dictionary” to define the term “flag.” See also *In re Barr*, 444 F.2d 588, 170 USPQ 330 (CCPA 1971)(noting that its appropriate to use technical dictionaries in order to ascertain the meaning of a term of art) and MPEP §2173.05(a) titled ‘New Terminology.’

comprises apparatus with means (column 28, lines 43-67, columns 29, 30, figures 1 and 2) to do the following:

- A. Obtaining user profile attributes such as age and zip code (physical location) (column 4, lines 54-55). The system also stores profiles of documents which enables a user to access target objects of relevance and interest to the user without requiring the user to expend an excessive amount of time and energy (column 4, lines 35-42) - Getting user profiles determined from past searches submitted by user (column 4, lines 58-61)– ("determining initial user profile information for the user using information included in past search queries submitted to a search engine by the user, wherein such information is independent of documents returned as search results to the past search queries;")
- B. Getting a summary of digital profiles of target objects that user likes or dislike (column 4, lines 56-58). The system can also infer the user/document interest (profile) from the user's behavior (column 17, lines 33-35). For example, the system might monitor which documents the user chooses to read, or not to read, and how much time the user spends reading them (column 17, lines 35-38) - ("inferring user profile information for the user;") ; ("determining the user profile information for the user using both the initial user profile information and the inferred user profile information")
- C. Getting user profiles determined from past searches submitted by user (column 4, lines 58-61) – ("the act of determining an initial user profile information for the user further uses past 4 document selections by the user")
- D. Attributes having values (column 10, lines 8-9, line 52, column 12, line 58) and scores (column 12, lines 60-67, column 13, lines 1-9). The score represents the frequency in

which a particular attributes appears in a document. Thus, the score represents the likelihood of particular attribute being correct – ("the initial user profile includes a plurality of attributes, each of the plurality of attributes having a value and a score")

- E. A node being examined as a device that is connected, as part of a computer network and the way data is stored in those devices so that it can be used efficiently. The edges are being examined as a set of connections or links between objects or nodes. In figures 1 and 2, these devices consist of information servers (figure 1 items I1 and In), vendor servers (figure 1, items V1 and Vn) and user devices (figure 2, items T1-Tn). These nodes and links are further represented in figures 3 and 4. The information servers contain the target documents (column 26, line 37, column 29, line 1-5) being requested and accessed by the user (column 28, 66-67, column 29, lines1-5). The system can link users to documents based on users' interest to the documents or other documents associated with each link (column 60, lines 62-64) – *Claims 7, 20, 39, 52*
- F. The system can relate a user with past searches words such past interest in films whose review text (attribute h) contains words like "chase," "explosion," "explosions," "hero," "gripping," and "superb" (column 10, lines 37-42). The system can also record **associations** between documents (movies) and **users** column 10, lines 43-46). A good indication that the user wants to rent a particular movie is that the user has previously rented other movies with similar attribute values. For example, if the user has often liked movies that customer 1 and customer 2 have rented, then the user may like other such movies. Since the system can system relationships between users and documents one skilled in the art could easily infer from these relationships to create graphs (column 10,

lines 46-53). With regard to the aspect of “(adding edges between nodes, if there is an association between the nodes to define a graph,)” can be interpreted as equivalent to “not adding edges between nodes, if there is no association. Therefore, that limitation does not have to happen, and can be interpreted as such –

- G. Mapping/graphing a user target profile interest summary indicative of said user's access patterns to target objects and sets of target object characteristics to said user pseudonym (C79, L8-10) -- ("inferring user profile information for the user using a topology of the graph and user")
- H. ("an edge is added between first and second nodes if a document corresponding to the first node was returned in a search results page to a search query from the user corresponding to the second node."), can be interpreted as equivalent to “not adding edge between ..., if there is no document corresponding..... Therefore, that limitation does not have to happen, and can be interpreted as such
- I. Attributes are multiplies by a weight, a weighted attributes are added together (column 18, lines 63-67, column 19, lines 1-7) –
- J. The system gathers documents with similar profiles, based on their content. In this case, the system gets information about intrinsic properties of users and/or documents (column 23, lines 55-65) –
- K. System using document meta data (column 11, lines 4-15)

16. Herz et al. does not explicitly describe an invention with a node that represents document or users. However, Rose et al. describes an invention that is directed to information access in

multiuser computer systems, and more particularly to a computer-based information system that enables users to access information from a wide variety of sources. According to Rose et al., each term, e.g. each word, in a document can be assigned a weight, based on its statistical importance. Thus, for example, words which frequently occur in a particular language are given a low weight value, while those which are rarely used have a high weight value. The weight value for each term is multiplied by the number of times that term occurs in the document. Referring to FIG. 5A, the results of this procedure is a vector of weights, which represents the content of the document (Col. 6, Line 9-17). "Each user profile also comprises a vector, based upon the user's indications as to his relative interest in previously retrieved documents. Each time a user provides a new response to a retrieved message, the profile vector is modified in accordance with the results of the indication. For example, if the user indicates interest in a document, all of the significant terms in that document can be given increased weight in the user's profile "(col. 6, lines 28-35). "A score of the document's relevance can be indicated by the cosine of the angle between that document's vector and the user's profile vector. A document having a vector which is close to that of the user's profile, such as Document 4, will be highly ranked, whereas those which are significantly different will have a lower ranking, for example Document 1" (col. 6, lines 55-60, Fig. 5B).

17. Therefore, it would have been obvious for one skilled in the art to have a system that have graphical representation of users and/or document. The motivation for one skilled to use graph would be to establish relationships between the user and/or document.

***Conclusion***

18. *Examiner has pointed out particular references contained in the prior arts of record in the body of this action for the convenience of the applicant. Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested that if the applicant is preparing to respond, to consider fully the entire references as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior arts or disclosed by the examiner.*
19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Evens Augustin whose telephone number is 571-272-6860. The examiner can normally be reached on Monday thru Friday 8 to 5 pm.
20. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Fischer can be reached on 571-272-6779.

/Evens J. Augustin/  
Evens J. Augustin  
July 22, 2007  
Art Unit 3621